

Notice of Allowability	Application No.	Applicant(s)	
	10/502,040	LIAO ET AL.	
	Examiner	Art Unit	
	Elizabeth Slobodyansky, PhD	1652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment 14 May 2007.
2. ☒ The allowed claim(s) is/are 47, 48, 50, 51, 54-59, 61-67, 69-74, 76, 107-111 and 113-118.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

The amendment filed May 14, 2007 canceling claims 1-46, 52, 77-81 and 89-106, amending claims 47, 51, 53-56, 59-61, 64, 71-74 and adding claims 108-118 has been entered.

Claims 47-51, 53-67, 69-74, 76 and 107-118 are pending.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Dr. Sheree Rybak on July 19, 2007.

The application has been amended as follows:

IN THE CLAIMS:

Amend claim 47 as follows:

47. An isolated polypeptide comprising an amino acid sequence having at least 95% [90%] sequence identity to the amino acid sequence of SEQ ID NO:30 and in which the amino acid at position corresponding to position 331 of SEQ ID NO:30 is Glycine, wherein the polypeptide has alanine 2,3 aminomutase activity [can convert alpha-alanine to beta-alanine in a cell].

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In claim 50,

line 1,

replace "49" with --48--;

line 2,

delete "mutated *Bacillus subtilis* or".

In claim 51,

line 3,

delete "a sequence shown in";

lines 3-4,

replace "can convert alpha-alanine to beta-alanine in a cell" with --has alanine 2,3 aminomutase activity--.

In claim 69,

line 1,

replace "A transformed cell" with --An isolated transformed cell--.

In claim 71, line 9,

replace "the alanyl-CoA" with --the acrylyl-CoA--.

In claim 72, line 3,

delete "acetylating".

In claim 76, line 3,

replace "comprising" with --having-- after "the polypeptide".

In claim 111, line 3,

replace "poly hydroxyacid" with --polyhydroxyacid--.

In claims 113-115, lines 2-3,

replace "can convert alpha-alanine to beta-alanine in a cell" with --has alanine 2,3 aminomutase activity--.

Cancel claims 49, 53, 60 and 112.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

The 112, 1st paragraph, and 101 rejections are withdrawn in view of the amendment.

The allowed claims are drawn to or depend from a polypeptide having alanine 2,3 aminomutase activity and having an amino acid sequence with at least 95% identity to SEQ ID NO:30 in which the amino acid at position corresponding to position 331 of SEQ ID NO:30 is Glycine. Applicants showed the importance of D331G mutation for converting *Porphyromonas gingivalis* lysine 2,3 aminomutase to alanine 2,3 aminomutase (specification, page 49, lines 4-9). The polypeptide disclosed by Frey et al

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(US 6,248,874) has Aspartic acid not Glycine at position 331, eliminating it as a relevant art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth Slobodyansky, PhD whose telephone number is 571-272-0941. The examiner can normally be reached on M-F 10:00 - 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapura Achutamurthy, PhD can be reached on 571-272-0928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Elizabeth Slobodyansky, PhD
Primary Examiner
Art Unit 1652

July 20, 2007